

1. In a system that includes a heterogeneous imaging device, a method for enabling the heterogeneous imaging device to operate as a homogeneous device, the method comprising:

5 initiating an imaging job that is compatible with an imaging driver for rendering within the system;

using a virtual job control interpreter at the heterogeneous imaging device to render at least a portion of the imaging job, wherein the virtual job control interpreter uses a job control device profile that is compatible with the imaging driver for mapping job control commands into one or more internal job control actions; and

10 rendering the at least a portion of the imaging job at the heterogeneous imaging device.

2. A method as recited in claim 1, wherein the heterogeneous imaging device is preloaded with a default job control device profile that is compatible with the imaging driver.

15

3. A method as recited in claim 1, wherein the job control device profile is downloaded to the heterogeneous imaging device.

20 4. A method as recited in claim 3, wherein the job control device profile is based on another imaging device.

5. A method as recited in claim 1, wherein the job control device profile is selected at run-time for compatibility with the heterogeneous imaging device.

6. A method as recited in claim 1, wherein the job control device profile is dynamically set to conform to another imaging device.

5 7. A method as recited in claim 1, wherein the imaging job is one of:

- (i) a print job;
- (ii) a scan job;
- (iii) a fax job; and
- (iv) a document management job.

10

8. A method as recited in claim 1, wherein the step for using the virtual job control interpreter comprises:

parsing job control commands from the imaging job; and
establishing settings of the heterogeneous imaging device according to
15 requirements specified by the job control commands.

9. A method as recited in claim 8, wherein the step for using the virtual job control interpreter further comprises at least one of:

parsing job control commands from the imaging job;
20 parsing page control commands from the imaging job; and
parsing page rendering commands from the imaging job.

10. A method as recited in claim 1, wherein the step for using the virtual job control interpreter comprises:

defining one or more capabilities of the heterogeneous imaging device;

5 defining capability settings associated with each of the one or more capabilities;

mapping a set of job control statements to the capability settings; and

utilizing a common definition interface to specify the capability settings and the one or more capabilities.

10 11. A method as recited in claim 1, wherein the step for using the virtual job control interpreter comprises:

extracting the job control device profile embedded in the imaging job; and

15 using a name of the job control device profile and a name of the heterogeneous imaging device to index and retrieve the job control device profile.

12. A method as recited in claim 1, wherein the step for initiating the imaging job is performed at a computer device that includes the imaging driver.

13. A homogeneous imaging system comprising:
a computing device configured to initiate an imaging job, wherein the client
computing device is coupled to a network;

5 the imaging job, wherein the imaging job is compatible with an imaging
driver; and

a heterogeneous imaging device coupled to the network, wherein the
heterogeneous imaging device includes a virtual job control interpreter to render at
least a portion of the imaging job, and wherein the virtual job control interpreter uses
a job control device profile that is compatible with the imaging driver for mapping
10 job control commands into one or more internal job control actions to render the at
least a portion of the imaging job at the heterogeneous imaging device.

14. A homogeneous imaging system as recited in claim 13, wherein the
heterogeneous imaging device is preloaded with a default job control device profile that is
15 compatible with the imaging driver.

15. A homogeneous imaging system as recited in claim 13, wherein the job
control device profile is downloaded to the heterogeneous imaging device.

20 16. A homogeneous imaging system as recited in claim 13, further comprising a
homogeneous imaging device coupled to the network, wherein the homogeneous imaging
device and the heterogeneous device are at least a part of an imaging cluster to selectively
render imaging jobs.

17. A homogeneous imaging system as recited in claim 16, wherein the job control device profile is based on the homogeneous imaging device.

18. A homogeneous imaging system as recited in claim 13, wherein the imaging 5 job is one of:

- (i) a print job;
- (ii) a scan job;
- (iii) a fax job; and
- (iv) a document management job.

10

19. A homogeneous imaging system as recited in claim 13, wherein the computing device includes the imaging driver.

20. A computer program product for implementing within a computer system a method for enabling the heterogeneous imaging device to operate as a homogeneous device within the cluster, the computer program product comprising:

5 a computer readable medium for providing computer program code means utilized to implement the method, wherein the computer program code means is comprised of executable code for implementing the steps for:

initiating an imaging job that is compatible with an imaging driver for rendering within the system;

10 utilizing a virtual job control interpreter at a heterogeneous imaging device of the system to render at least a portion of the imaging job, wherein the virtual job control interpreter uses a job control device profile that is compatible with the imaging driver for mapping job control commands into one or more internal job control actions; and

15 rendering the at least a portion of the imaging job at the heterogeneous imaging device.

21. A computer program product as recited in claim 20, wherein the computer program code means is further comprised of executable code for implementing a step for downloading the job control device profile to the heterogeneous imaging device.

20

22. A computer program product as recited in claim 21, wherein the job control device profile is based another imaging device.

23. A computer program product as recited in claim 20, wherein the computer program code means is further comprised of executable code for implementing a step for receiving the job control device profile as a selection at run-time for compatibility with the heterogeneous imaging device.

5

24. A computer program product as recited in claim 20, wherein the step for utilizing the virtual job control interpreter comprises:

parsing job control commands from the imaging job; and

establishing settings of the heterogeneous imaging device according to

10 requirements specified by the job control commands.

25. A computer program product as recited in claim 24, wherein the step for utilizing the virtual job control interpreter further comprises at least one of:

parsing job control commands from the imaging job;

15 parsing page control commands from the imaging job; and

parsing page rendering commands from the imaging job.

26. A computer program product as recited in claim 20, wherein the step for utilizing the virtual job control interpreter comprises:

defining one or more capabilities of the heterogeneous imaging device;

defining capability settings associated with each of the one or more capabilities;

mapping a set of job control statements to the capability settings; and

utilizing a common definition interface to specify the capability settings and the one or more capabilities.

10 27. A computer program product as recited in claim 20, wherein the step for utilizing the virtual job control interpreter comprises:

extracting the job control device profile embedded in the imaging job; and

using a name of the job control device profile and a name of the heterogeneous imaging device to index and retrieve the job control device profile.

15